

# SIGMA-DELTA MODULATION INVERTER WITH PROGRAMMABLE WAVEFORM OUTPUT

## ABSTRACT OF THE DISCLOSURE

**[0082]** An inverter for converting a DC input voltage into an AC output voltage using the sigma-delta modulation (SDM) is provided which includes: a SDM controller for producing a modulated output voltage signal according to a reference voltage signal, a driving circuit electrically connected to the SDM controller for producing a driving signal according to the modulated output voltage signal, and a power inversion stage circuit electrically connected to the driving circuit for producing the AC output voltage according to the driving signal. A controller for producing a modulated output voltage signal according to a reference voltage signal is also provided which includes: an integrator circuit, a sample-and-hold circuit electrically connected to the integrator circuit, and a quantizer circuit electrically connected to the sample-and-hold circuit and electrically connected to an input terminal of the integrator circuit through an output terminal thereof.